

Headquarters U.S. Air Force

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8211 - U.S. Air Force Technical Sufficiency Reviews of Acquisition ESOH Risk Management



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Report Documentation Page				Form Approved OMB No. 0704-0188	
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1. REPORT DATE MAY 2009		2. REPORT TYPE		3. DATES COVERED 00-00-2009 to 00-00-2009	
4. TITLE AND SUBTITLE U.S. Air Force Technical Sufficiency Reviews of Acquisition ESOH Risk Management				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Headquarters U.S. Air Force,SAF/AQRE,1060 Air Force Pentagon,Washington,DC,20330				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES Presented at the NDIA Environment, Energy Security & Sustainability (E2S2) Symposium & Exhibition held 4-7 May 2009 in Denver, CO.					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 13	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			



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Bottom Line Up Front

- **Efforts to integrate and institutionalize ESOH considerations into Acquisition Systems Engineering continue**
- **Policy and guidance in place**
- **Focus is now on implementation and accountability**
- **Today's presentation addresses accountability – integrating ESOH into Acquisition program Technical Sufficiency Reviews**

“Technical Sufficiency Reviews” – generic term for the subset of Acquisition program reviews that assess technical planning and management



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Overview

- **Policy evolution**
- **Four Accountability Tools**
 - **Programmatic Environment, Safety, and Occupational Health Evaluation (PESHE)**
 - **System Safety – ESOH Management Evaluation Criteria for DoD Acquisition**
 - **Program reviews of High and Serious ESOH risks**
 - **Program Support Review (PSR)**
- **Integrating ESOH into Systems Engineering Booklet**



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Policy Evolution

- **Initial focus on integrating ESOH into Acquisition systems engineering policy and guidance**
 - **DoDI 5000.02 (8 Dec 08)**
 - **Evolution began in 1996**
 - **Incorporates key policy memos from 2004-2007**
- **Defense Acquisition Guidebook (DAG)**
 - **Defines expectations for how to implement DoDI 5000.02**
 - **Provides detailed guidance**
- **“System Safety in Systems Engineering” DAU CLE009**
 - **Established in 2005**
 - **Over 2000 graduates**



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Policy Evolution (cont'd)

- **Subsequent focus on revitalizing systems engineering**
 - **DoD emphasis began in 2003**
 - **ESOH, as part of systems engineering, also benefited**
 - **Reflected in DoDI 5000.02 and DAG**
 - **Re-established OSD and Service oversight of programs**
- **Current focus of both systems engineering and ESOH on accountability by mandating reviews**
 - **PESHE**
 - **System Safety – ESOH Management Evaluation Criteria for DoD Acquisition**
 - **Program reviews of High and Serious ESOH risks**
 - **PSR**



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PESHE

- **Mandated by DoDI 5000.02 (dating back to 1996)**
- **Required contents**
 - **Describes the strategy for integrating ESOH into systems engineering**
 - **Documents the status of program ESOH risk management**
- **Required reviews**
 - **Milestone B, Milestone C, and Full Rate Production Decisions**
 - **In support of Systems Engineering Plan (SEP) and Acquisition Strategy reviews**
- **E2S2 presentations on Monday and Thursday**

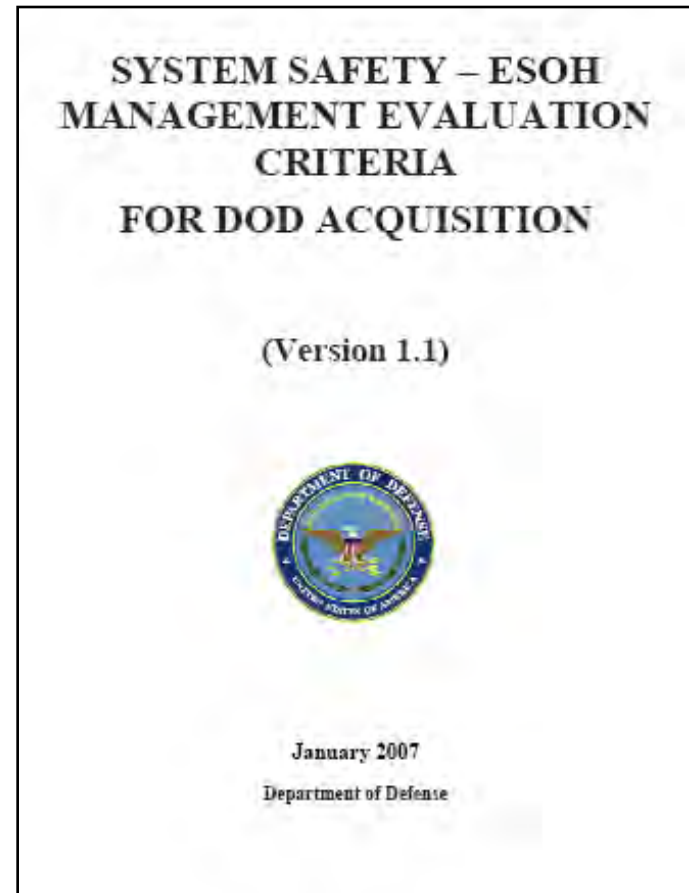
Essential for PESHE to Document Actual Program Office Activities, not regurgitate policy



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System Safety – ESOH Management Evaluation Criteria for DoD Acquisition

- **Tool to assess SE technical discipline in the integration of ESOH using System Safety methodology**
 - **Technical and Program Reviews (self assessment)**
 - **Milestone Review Process (oversight assessment)**
- **Four key areas for evaluation**
 - **Planning**
 - **Requirements Analysis**
 - **Hazard analysis**
 - **Resources**
- **Assessment criteria for each area for each life cycle phase**
- **Weighted summation of four ratings to overall rating for each life cycle phase**





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Program reviews of High and Serious ESOH risks

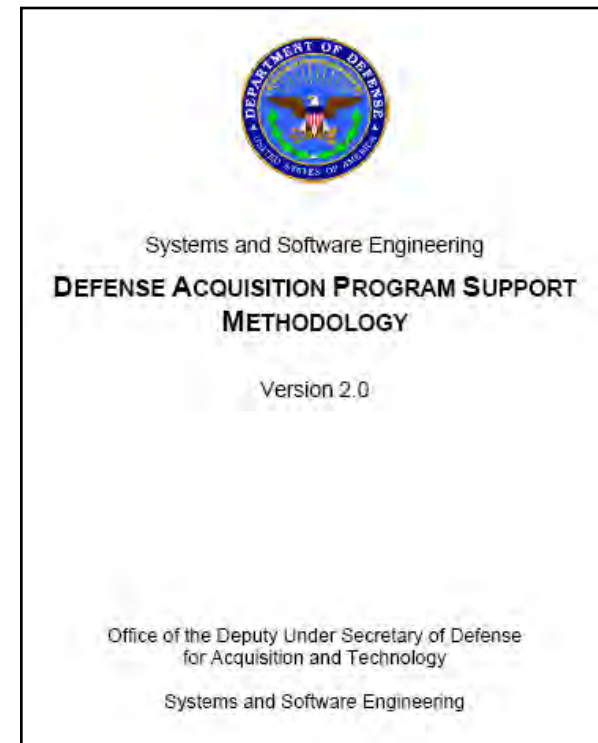
- **2004 USD(AT&L) memo required reporting of ESOH risk status at technical and program reviews (as appropriate)**
- **2006 USD(AT&L) memo required reporting of High and Serious risks at all program reviews (internal and external)**
- **Incorporated into DoDI 5000.02**
- **Purpose:**
 - **Provides periodic reassessments of risk acceptance decisions**
 - **Maintains visibility on efforts to mitigate risks**
- **Requirements:**
 - **Report on all “current” high and serious risks regardless of acceptance status**
 - **Document details in PESHE**



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Program Support Review (PSR)

- OSD began in 2003
- DoDI 5000.02 (2008) requirements
 - “PSRs are a means to inform an MDA and Program Office of the status of technical planning and management processes by identifying cost, schedule, and performance risk and recommendations to mitigate those risks”
 - “PSRs shall be conducted by cross-functional and cross-organizational teams appropriate to the program and situation”
- Teams use *Defense Acquisition Program Support (DAPS) Methodology*
 - Section 4.0 Technical Process
 - Sub Area 4.1 Design Considerations
 - Factor 4.1.4 ESOH





Program Support Review (PSR)

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Mission Capabilities	Viability	Work Breakdown Structure (WBS)	<u>Environment, Safety, and Occupational Health</u>	Estimation
Concept of Operations	Constraints and Dependencies	Management Structure and Communications	Human Systems Integration (HSI)	Design Verification
Mission Description	Budget Sufficiency and Phasing	Management Methods, Metrics, and Techniques	Requirements Development	Test and Evaluation Plan
Family of Systems/System of Systems	Program Funding and Allocation	Information Management (IDE, IT, Data Rights)	Analysis and Decomposition	Verification Correlation
Dependencies/Interfaces	Continuity and Stability	Management of Dependencies and External Interfaces (FoS / SoS)	Management of Requirements	Supportability Planning
Analysis of Alternatives	Staffing Level		Technology Maturity and Integration	Acquisition Logistics
Validity and Currency	Sufficiency of Numbers and Qualifications	Contracting	Technical Baselines	Performance-Based Logistics (PBL)
Linkage and Traceability	Continuity and Stability	Prime Contractor Management	Technical Review Planning	Sustainment
Capabilities	Management	Subcontractor Management	Configuration Management	Performance Effectiveness
Reasonableness, Stability, and Testability	Acquisition Strategy	Value Engineering	Baseline Stability	Design Capabilities Assessment
Key Performance Parameters and Key System Attributes	Credibility	Technical Process	Engineering Tools	Suitability
Resources	Acceptability	Design Considerations	Systems and Software Engineering (SSE) Tools	Reliability Assessment
Program Schedule Overview (Tier 1)	Knowledge-Based Decisions and Milestones	System Assurance	Modeling and Simulation (M&S) Tools	Availability Assessment
Viability	Statutory and Regulatory Compliance and Guidance	Modular Open Systems Approach	Producibility and Production Planning Tools	Maintainability Assessment
Constraints and Dependencies	Entrance and Exit/Success Criteria	Architecture	Software	Survivability
Budget Sufficiency and Phasing	Certifications	Corrosion	Software Development Plan	Live Fire Test and Evaluation Assessment
Program Funding and Allocation	Program and Project Management	Spectrum Management		Production
Program Schedule Overview (Tier 1)	Program Plan/Schedule (IMP/IMS)	Sustainment as a Design Consideration		Assessed Manufacturing
				Assessed Quality
				Special Interest Areas
				Readiness Levels



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Integrating ESOH Into Systems Engineering Booklet



**Environment, Safety, and
Occupational Health (ESOH)
in Acquisition**

Integrating ESOH into Systems Engineering

- **Builds on CLE009 and depicts when ESOH activities should be performed to influence system design throughout the systems engineering process**
- **System Safety-ESOH Mgt. Evaluation Criteria are included**



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Summary

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Questions?



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